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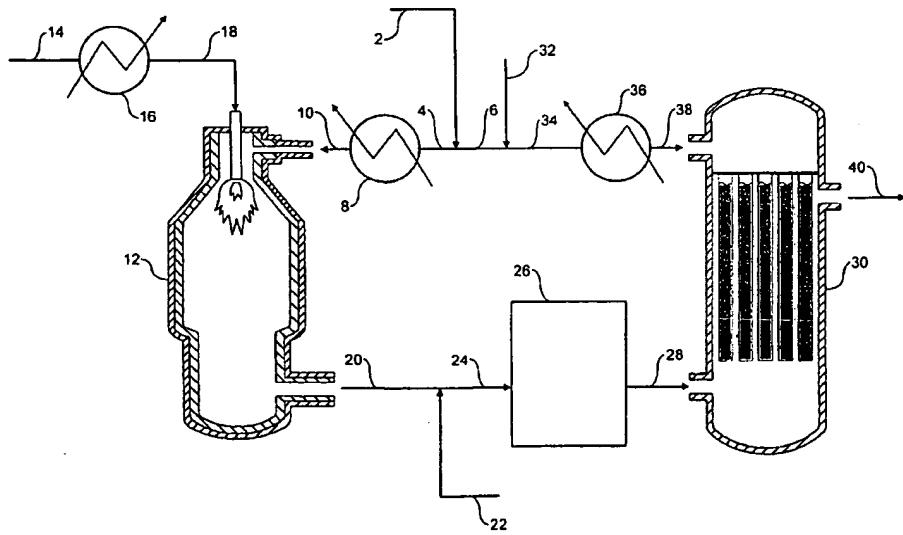
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(54) Title: A PROCESS AND APPARATUS FOR THE PRODUCTION OF SYNTHESIS GAS



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(57) Abstract: Reactive diluent fluid (22) is introduced into a stream of synthesis gas (or "syngas") produced in a heat-generating unit such as a partial oxidation ("POX") reactor (12) to cool the syngas and form a mixture of cooled syngas and reactive diluent fluid. Carbon dioxide and/or carbon components and/or hydrogen in the mixture of cooled syngas and reactive diluent fluid is reacted (26) with at least a portion of the reactive diluent fluid in the mixture to produce carbon monoxide-enriched and/or solid carbon depleted syngas which is fed into a secondary reformer unit (30) such as an enhanced heat transfer reformer in a heat exchange reformer process. An advantage of the invention is that problems with the mechanical integrity of the secondary unit arising from the high temperature of the syngas from the heat-generating unit are avoided.

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